

Accent and Stereotypes: Their Effect on Perceptions of Teachers and Lecture Comprehension

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ABSTRACT *This study had three goals: 1) to argue that a topology of accents (British, North American English and Malaysian) based on similarity to the listener will yield different perceptions of accented teachers, 2) to assess the relationship between stereotypes and perceptions of teachers, and 3) to examine how accents affect comprehension. Results indicated that students assigned more favorable ratings to teachers with standard North American accents. Accentedness also affected comprehension. Subjects recalled more information from North American teachers than from British or Malaysian teachers. Stereotyping had no measurable effect on perception formation or comprehension.*

Perceptions of others may be based on sex, age, race, ethnic background, and physical appearance. In addition to physical cues, language influences perceptions of others (Giles & Johnson, 1981), with only 10 to 15 seconds of speech needed for assessments to be made (Entwisle, 1970). Accents and dialects, in particular, influence perceptions (e.g., Eisenstein, 1983; Fishman, 1977; Garner & Rubin, 1986; Giles, Bourhis, & Taylor, 1977; Giles & Johnson, 1981; McKirnan & Hamayan, 1984). Although dialects and accents are often used as synonyms, the former traditionally refers to regional variations in language and the latter refers to differences among national groups (Gill, 1991; Gill & Badzinski, 1989; 1992). For example, the differences in sound between a Bostonian and Iowan would be a matter of dialect while the differences between a New Zealander and an American would be a matter of accent.

Edwards (1982) discovered that teachers' evaluations of students are influenced by accents. Even when combined with factors such as photographs or work performed, the importance of accent does not diminish. This study is concerned with an area of study receiving little attention—accents in the classroom, specifically standard North American English students' views of teachers with accents. According to Edwards (1982) "schools represent the single most important point of

contact between speakers of different language varieties" (p. 27). Teachers and students must make every attempt to understand each other, regardless of the accent, if learning is to occur (Mann & Hoffman, 1985).

Although much literature focuses on differences among regional dialects (e.g., Brown, Giles, & Thakerer, 1985; McKirnan & Hamayan, 1984), this study examines multi-national accents. With the increasing number of foreign born individuals in the United States, particularly foreign instructors and teaching assistants (Banks, 1991; Heller, 1985; 1986; 1987, Nelson, 1991; Solomon, 1991), the multi-national classroom is a reality. The number of foreign students in the United States has been doubling every five or six years (Chishti, 1984) with the largest increase among Asian and Hispanic students (*Chronicle of Higher Education*, 1990; Evangelauf, 1988). Numbers of foreign teaching assistants and professors similarly have increased (Banks, 1991; Heller, 1985; 1986; 1987, Wilkening, 1991).

Research establishes that individuals view people having accents similar to their own more favorably (Edwards, 1982; Hurt & Weaver, 1972; Mulac, Hanley, & Prigge, 1974; Ryan & Sebastian, 1980) than people possessing dissimilar accents (e.g., Eisenstein, 1983; Garner & Rubin, 1986; Giles & Johnson, 1981; McKirnan & Hamayan, 1984). Consistent with the theoretical position advanced by Rubin (1981) and others (Byrne, 1971; Festinger, 1954; Kramer, 1975; Sunnafrank, 1984; Sunnafrank, 1985), similarity in attitudes and features affects communication processes and perceptions formed. Based on this understanding, this study creates a three part topology of accents: dissimilar, similar, and nonaccented. Thus, despite dissimilar accents prompting less favorable perceptions of sources, accents which are more similar to standard North American English (e.g. British) may result in less severe assessments than accents which are highly dissimilar (e.g. Malaysian). Nonaccent refers to the familiar accent. For example, the middle plains "news-caster" accent spoken by Tom Brokaw constitutes a nonaccent. The first hypothesis tests this topology and perception formation.

H1 As accents of the teacher become more dissimilar from students' accents, perceptions of teachers will be less favorable.

The second hypothesis is concerned with outcomes of perceptions. It is clear that perceptions of individuals have measurable outcomes. For example, nonstandard accented individuals are less successful in the job market than standard accent users (Giles, Wilson & Conway, 1982). Nonstandard accent users are perceived as low socio-economic class members and characterized as janitors while standard accented persons are characterized as attorneys (Berk-Seligson, 1984).

Despite efforts to train international teachers (Althen, 1991; Ford, Gappa, Wendorff, & Wright, 1991; Schneider and Stevens, 1991), a common complaint about foreign accented teachers made by standard accented students and parents is that teachers are unintelligible (Heller, 1985, Nelson, 1991, Solomon, 1991). Consequently, we would expect that comprehension would be affected. Berger (1989) argues that communication scholars have expended little energy on studying message comprehension or understanding. Even though some scholars have studied comprehension (e.g. Badzinski & Gill, 1994; Haslett, 1987), few have examined specific factors that may affect comprehension. Studying accent as a possible factor affecting comprehension offers insight into the learning process. Because more resources are required to understand accents (Bradac, Hopper & Weimann, 1989; Kahneman, 1973) of an accented person, less effort can be directed

to processing the messages. If this is true, we would expect accent and amount of information recalled to be negatively related. On the other hand, some research suggests that more attentional processes are given to more difficult tasks (Kahne-man, 1973; Lachman, Lachman & Butterfield, 1979). If more attention is directed to accented messages, then information conveyed by accented speakers may actually be better remembered than that of nonaccented speakers. Applying assumed similarity theories (e.g. Rubin, 1981), we would expect that dissimilar accents would prompt greater comprehension difficulties. Hypothesis #2 tests the relationship of accents and comprehension.

H2 As accents of the teacher become more dissimilar from students' accents, comprehension will be adversely affected.

This study also examines the relationship between stereotypes and perceptions. Grant and Holmes (1981) define stereotypes as "over generalizations that are applied to any ethnic group member regardless of his or her individual characteristics" (p. 107). Research assumes that we form perceptions of accented persons based on stereotypes held about that ethnic group. Whether we possess stereotypes which prompt our perceptions or whether perceptions are made at the moment of hearing the accent has not been investigated.

To gain insight into whether stereotypes are driving perceptions of accented people, the Assumed Characteristics Theory (Jonas and Hewstone, 1986) is applied. This theory differs from other theories on stereotypes because of how it analyzes background information. For example, many stereotyping theories assume race or nonverbal factors are the most significant variables on which stereotypes are formed (Jussim, Coleman, & Lerch, 1987). The Assumed Characteristics Theory, however, suggests that information about individuals (e.g. traits; behaviors; and prior knowledge or experience) is more important than racial factors in forming stereotypes. Because this theory suggests that a variable will not produce the same conclusion for all situations and individuals, it is particularly relevant for communication studies.

The Assumed Characteristics Theory is based on four propositions: 1) People generally assume in-groups have more favorable characteristics than out-groups. In-groups are identified as people we conclude are similar to ourselves or share salient features with us. This proposition is similar to homophily. 2) Stereotypes inform us about important background characteristics. Stereotypes become organizing features used to categorize individuals according to relevant background information. Background information consists of values, political ideologies, religious perspectives, work habits, and so forth. 3) Traits elicit different stereotypes than behaviors. Traits are qualities (e.g., honesty, sincerity) whereas behaviors are observable actions. This theory argues that traits are often more telling than behaviors because traits may reflect the personality of individuals or those qualities we deem to be important. 4) Background characteristics have a greater impact on stereotype formation than does race. This theory uniquely argues that race has a minor role in stereotype formation. Thus, if stereotypes are made based on accents, the sound of the language rather than visual clues of race will take precedence in shaping perceptions (Jussim, Coleman & Lerch, 1987).

A final goal of this study is to examine the effect of stereotyping on perception formation and comprehension by posing two research questions. Much literature suggests that initial impressions prompt future actions and thoughts of interactants

(Banaji, Hardin & Rothman, 1993; Berry, 1991; Fiske & Von Hendy, 1992; Gangestad, DiGeronimo, Simpson & Biek, 1992; Johnson & Vinson, 1990; Kenyon, 1989). Some research (e.g. Gangestad, et. al) has used as little as one minute taped segments and found that subjects judged strangers and based future perceptions of this stranger on the limited exposure. Leonard and Locke (1993) discovered that initial impressions resulted in stereotypes being formed which became the cognitive pattern for accepting or rejecting subsequent information. Although we suspect stereotypes, once formed, affect future interactions (Feldman, 1972), we do not know the direct effect stereotyping has on perception formation when applied only to the accent of the person as the prompt for the stereotype. By examining the stereotype individuals employ, we gain a clearer understanding of the perceptual processes and the effect stereotyping has on outcome measures such as comprehension.

RQ1 Does the presence of stereotypes in students affect perceptions made of teachers?

RQ2 Does the presence of stereotypes affect lecture comprehension?

METHODS

Participants and Procedures

Participants (N = 90) volunteering from communication courses were randomly assigned to accent and message conditions and given course credit for participating. Beginning communication courses (general education classes) were used because of the diversity of majors represented. All subjects were standard North American English accented persons.¹

Fifteen participants were randomly assigned to one of six conditions in which they 1) heard a speaker of one accent deliver one lecture, 2) responded to the stereotyping index scale, 3) answered scaled items assessing their perceptions, 4) responded to an open recall task, and 5) responded to five factual information questions about the lecture. Participants were given no specific information about the presence of an accent.

Materials

Accents. Three levels of accents—American (Standard North American English), British (similar), Malaysian (dissimilar)—were used. The British and Malaysian accents were chosen based on the language structure employed. The British sentence involves a similar syntactic pattern as the Standard North American accent while the Malaysian sentence structure is not based on the same structure. Although the sound or accent is the variable of interest, the syntax form or sentence structure of the language affects the accent.

Six male speakers (two American, British and Malaysian) were used. In order to assess accentedness, participants responded to a three item instrument developed by Gill and Badzinski (1989) which asked them to respond using a seven point scale where 1 represented "not at all" and 7 represented "extremely." The items asked "how noticeable was the teacher's accent," "how strong was the teacher's accent" and "how strongly did the accent affect your understanding of the teacher." A .92 reliability coefficient emerged from a Cronbach's analysis.

Lectures. Two lectures that emerged as most comprehensible in a pilot study were used. These lectures were designed to be similar in form (asking for basic information over a specific content area) but diverse in topic, unfamiliar to participants, and believable as portions of a lecture given in a communication class. The messages emerging from the pilot study discussed definitions of Interpersonal Communication (hereafter referred to as Interpersonal Communication) and elements of speakers' or writers' styles (hereafter referred to as Style).

Each message was approximately 3 minutes in length. The major criterion for lecture length was that the text be long enough for a clear message to be developed, yet short enough for listeners to have little difficulty, due to length and complexity of the message, in recalling the information presented. Each lecture was recorded on audio tape. Lecture understandability was measured using a three item scaled instrument developed by Gill and Badzinski (1989). The instrument asked participants to respond using a seven point scale identical to the accentedness measure. The items asked "how hard was the teacher to follow," "how clear was the teacher," and "how easy was the teacher to understand." A Cronbach's alpha coefficient of .83 was achieved.

Although much literature suggests that initial impressions based on as little as a minute of exposure prompt future actions and thoughts (e.g., Gangestad, DiGeronimo, Simpson & Biek, 1992), three minute audio taped messages do limit the information available to subjects. Because accent was the variable of most interest for this study, audio taped messages were used to eliminate other cues (e.g., facial expression, gestures, etc.) influencing the formation of perceptions. Thus, any possible conclusions about stereotypes, comprehension, and their relationship to accents must be viewed in light of this limitation.

Stereotyping Index. A 25 item 11 point scale applying the Assumed Characteristics Theory and developed for national stereotypes was used (Jonas & Hewstone, 1986; Jussim, Coleman, & Lerch, 1987). This scale asked participants to respond to traits or characteristics and assess whether they believed the British, Americans, or Malaysians possessed them. For example, subjects in the British accent condition were asked "How intelligent are British people?" Subjects responded to each question using an eleven point scale ranging from "not at all" to "extremely."

Results of the eleven point stereotyping scale emerge into two data categories. While no person is completely controlled by or free of stereotypes, the scale assumes that individuals who respond with a 4, 5, or 6 represent individuals who do not stereotype according to a particular trait. Subjects, however, responding with a 0, 1, 2, 3, 7, 8, 9, or 10 have strong stereotypes (Jonas and Hewstone, 1986). After each of the 25 characteristics had been individually scored, the items were added yielding a total for each participant ranging from 25 to 0. The higher the total number of recognized stereotypical traits, the more the individual engaged in stereotyping. Participants responding in a stereotypical manner to more than half of the items were coded with a 1 (representing the stereotype) and those responding to fewer than half in a stereotypical manner were coded with a 0 (representing no stereotype).²

Bodenhausen and Wyer (1985) and others (Banaji, Hardin & Rothman, 1993; Berry, 1991; Fiske & Von Hendy, 1992; Gangestad, DiGeronimo, Simpson & Biek, 1992; Johnson & Vinson, 1990; Kenyon, 1989) discovered that once individuals have formed judgments, additional information is filtered to confirm the initial

impression. As a result, the order of tasks was altered among subjects so that half of the subjects answered the stereotyping scale initially with the remainder answering it as the last task of the experiment.

Perceptions of Teachers. The Speech Dialect Attitudinal Scale (SDAS), developed by Mulac (1975, 1976), measured students' perceptions of teachers across three dimensions: 1) dynamism, 2) socio-intellectual qualities, and 3) aesthetic qualities. Each dimension is made up of four items. Cronbach's alpha analyses revealed lower reliability figures (socio-intellectual = .80; dynamism = .68; aesthetic = .77) than those reported (.92 to .99) by Mulac (1976). Although Zahn and Hopper (1985) reported that the SDAS has been used in more studies to date than any other measure and it has generally yielded a consistent factor structure, the focus of this study may explain the lower reliability scores. While Mulac examined differences among regionally accented speakers, this study examined differences among national accents. Subjects may base perceptions of people of other nationalities on different qualities than they use in making assessments of people of other regions within one nation. Thus, the change in the target group may account for the lower reliability scores.

Comprehension. Comprehension was tested in two ways: 1) factual information recall and 2) an open recall task. Five factual information questions, whose answers were explicitly stated in the lectures, were constructed for each lecture. Participants' responses to the information questions were coded by two independent coders. Correct responses were coded with a "1" while incorrect responses were assigned a "0." A Cohen's Kappa determined agreement among the coders revealing a Kappa statistic of .83. Disagreements were resolved through discussion and all data were included in analysis.

The open recall task asked participants to "tell me what you remember from the lecture." The responses were placed into idea units as identified by Stafford, Waldron, and Infield's (1989) idea unit coding procedure. This procedure identified three response categories: 1) reproductions of the lecture material, 2) themes which represent the general nature of the lecture but not specific information presented and 3) descriptions about this communication experience. Two independent coders coded the responses. A Cohen's Kappa revealed a Kappa statistic of .85. Disagreements were resolved through discussion.

RESULTS

Manipulation Checks

Accent. Participants' responses to the perceived intensity of the teacher's accent were submitted to a 3 (accent—British, American, and Malaysian) \times 2 (lecture—Interpersonal Communication and Style) \times 2 (stereotype—no stereotype) MANOVA to determine if subjects viewed the accents according to the topology. As predicted, a significant main effect emerged for accent ($F[2,78] = 57.22, p = .000, \eta^2 = .60$), revealing subjects viewed the teachers' accents differently. Post-hoc analyses using Student Newman Keul tests revealed significant differences at the .05 level in the direction indicated by the topology among all groups ($F[2,87] = 70.14,$

$p < .000$, $\eta^2 = .62$). The North American English accent ($M = 5.89$) was perceived most favorably and the British accent ($M = 2.94$) was perceived less favorably than the North American English but more favorably than the Malaysian accent ($M = 2.01$).

Lecture. Participants' responses were submitted to a 3 (accent—British, American, and Malaysian) \times 2 (lecture—Interpersonal Communication and Style) \times 2 (stereotype-no stereotype) MANOVA. No lecture effects emerged as significant ($F [1,78] = .60$, $p = .441$, n.s.) which suggests that subjects viewed the lectures as similarly understandable. A significant accent by understandability interaction ($F [2,78] = 11.73$, $p < .000$, $\eta^2 = .23$) emerged. Post-hoc tests using a Student Newman Keul's procedure revealed significant differences at the .05 level emerged according to the topology ($F [2,87] = 20.81$, $p < .000$, $\eta^2 = .32$). North American English accented teachers ($M = 4.90$) were most understandable, British teachers ($M = 3.50$) were less understandable than American but more understandable than Malaysian teachers ($M = 2.78$).

Perceptions of Teachers

Participants' responses to the SDAS (dependent measure) were submitted to a 3 (accent-British, American, Malaysian) \times 2 (lecture-Interpersonal, Style) \times 2 (stereotype, non-stereotype) MANOVA. As predicted, a significant main effect emerged for accent ($F [2,78] = 7.88$, $p < .001$, $\eta^2 = .17$) and dimension (SDAS scale) ($F [2,156] = 9.15$, $p < .000$, $\eta^2 = .11$). No interaction effects or main effects for stereotype ($F [1,78] = .02$, $p = .877$, n.s.) or lecture ($F [1,78] = .13$, $p = .723$, n.s.) were observed. Table 1 presents the means for each accent and SDAS item calculated from Student Newman Keul tests.

TABLE 1
Mean Differences on the Speech Dialect Attitudinal Scale Items,
Information Recall and Messages

Accent	Dimension	Significance			
<i>Speech Dialect Attitudinal Scale</i>					
	<i>Socio-Intellectual</i>	Group	1	2	3
British	3.89	Grp 1			
American	4.40	2	*		
Malaysian	4.03	3			
	<i>Dynamism</i>	Group	1	2	3
British	3.51	Grp 1			
American	4.27	2	*		
Malaysian	4.03	3		*	
	<i>Aesthetic</i>	Group	1	2	3
British	3.57	Grp 1			
American	4.14	2	*		
Malaysian	3.47	3		*	
<i>Information Recall</i>					
		Group	1	2	3
British	.47	Grp 1			
American	.71	2	*		
Malaysian	.51	3		*	

* $p < .05$ level.

As predicted, subjects viewed North American English accented teachers most favorably. Although subjects' perceptions of accented teachers did not emerge according to the hypothesized topology, significant differences were observed with each of the SDAS measures (socio-intellectual qualities = $F [2,87] = 3.08, p = .05, \eta^2 = .16$; dynamism = $F [2,87] = 7.98, p = .0007, \eta^2 = .16$; aesthetic = $F [2,87] = 5.09, p = .008, \eta^2 = .11$) on an accented/nonaccented dichotomy. British and Malaysian accented teachers were perceived less favorably than North American English accented teachers. No significant differences occurred between perceptions of British and Malaysian teachers.

The first research question asked if the presence of stereotypes affected perceptions of teachers. The analysis mentioned above revealed no significant main effect for stereotype indicating subjects' predispositions to stereotype had no significant effect on forming perceptions of teachers.³

Comprehension

Information Question Recall. Participants' responses to the five information questions for each lecture were submitted to Chi-Square analyses. As predicted, a significant Chi-Square statistic emerged for accent ($\chi^2 [df = 2, N = 450] = 21.37, p < .001$). Post-hoc analyses revealed that recall differed significantly along an accented/nonaccented dichotomy. Although differences between the British and Malaysian conditions were not statistically significant at the .05 level, differences did occur between the standard accent and each non-standard accent.

Open Recall. Results from the open recall task did not emerge as significant when submitted to a Chi-Square analysis ($\chi^2 [df = 4, N = 220] = 6.37, n.s.$). This lack of significance may have been a problem of task independence. Given that the two measures used to assess comprehension immediately followed one another in the experiment, subjects may have avoided duplicating responses.

Research question #2 asked whether the presence of stereotypes will affect message comprehension. The results of the recall tasks were submitted to Chi-Square analyses. No significant results emerged.⁴

DISCUSSION

This study sought to extend knowledge about the role accents play in perceptions made of accented teachers and the effects of these perceptions on comprehension and learning. Given that "by the year 2000 one of every four Americans will be Black, Hispanic or Asian" (*NSCA Newsletter*, 1991, p. 2), the effect of accents in the classroom is paramount. Although limited in generalizability, this study offers an important first look at the issue of accents in classrooms.

Overall the pattern of results suggests that accent is an important influence on overall perceptions of teachers and comprehension of information. Differences in perceptions of the speakers' socio-intellectual abilities, dynamism, and aesthetics and differences in comprehension emerged according to an accent/no accent dichotomy. Although the analysis of the stereotyping index did not result in significant effects, the findings support the need for further investigation.

Consistent with previous research (Bochner & Bochner, 1973; Brown, Giles, & Thakerer, 1985; Giles & Sassoon, 1983; Ryan & Sebastian, 1980; Stewart, Ryan &

Giles, 1985), this study confirms that North American listeners assign more favorable ratings to accents similar to their own. Chishti (1984) and others (e.g. Heller 1985, 1986, 1987; Solomon, 1991; Wilkening, 1991) indicate that there are increasing numbers of foreign students and teachers entering American educational systems, which suggests that we should consider how accents influence comprehension and learning. Although limited in generalizability, this study furthers our understanding about how standard accented students form perceptions of non-standard accented teachers. Future research might examine how non-standard accented listeners evaluate accented and non-accented speakers.

Although North American English accented teachers overall were viewed most favorably, the accent topology was not supported and hypothesis #1 was only partially confirmed. The accent topology states that Malaysian accented teachers representing the most dissimilar accent should be viewed least favorably, British more favorably than Malaysian accented teachers but less favorably than the North American English accented teachers. While North American English accented teachers were most favorably evaluated, there was no significant difference between the British and Malaysian speakers for any of the three SDAS dimensions. Surprisingly, even though subjects recognized accents according to the topology, this did not appear to affect their perceptions of accented teachers.⁵ A possible reason may rest in the experimental nature of this study. In an actual classroom, students have a variety of experiences upon which to base perceptions. The limited messages used here may have affected the results and our ability to generalize the conclusions to actual classrooms. Thus, accent as a single cue may not be substantial enough to prompt individuals to make distinctions on a more sophisticated level than similar/dissimilar.

It may be that individuals made broad judgments about others based on a similarity/dissimilarity assessment but are largely unconcerned about gradations of dissimilarity. It is interesting that when specifically asked to assess accentedness, participants assessed the teachers' accents according to the topology viewing the North American English accent most favorably and the British accent less favorably than the American accent but more favorably than the Malaysian accent. When asked to assess specific qualities (dynamism, socio-intellectual, and aesthetic qualities) of the teachers, however, participants did not make perceptions according to the accent topology. This apparent contradiction suggests that individuals may form perceptions based on broad categories rather than specific qualities of an accent.

The experimental nature of the study may have had an impact on these results. Participants heard audio tapes of accented teachers but had no other exposure to the stimulus person. Further research should evaluate whether nonverbal information other than paralinguistic cues alter students' perceptions. In addition, participants were exposed to only three minutes of material. Three minutes may not be sufficient time for firm perceptions to be formed. Future research should examine actual classrooms or include longer segments of lectures. It also would be interesting to test students' perceptions across time. For example, a longitudinal study comparing students' perceptions after the first day, first month, third month, and at the end of a semester of experiencing a foreign accented teacher would lend insight into how students overcome or confirm initial impressions and how the accent influences perceptions and learning. In short, when provided with more cues about accented teachers and more time exposure, students may respond differently.

Partial support emerged for Hypothesis #2 stating that comprehension should be adversely affected as accent became more dissimilar. As with perception formation, participants acted on broad categories of accentedness rather than according to the topology established. Accents may have several impacts on comprehension. The debate on comprehension says, on the one hand, people have limited cognitive resources available to allocate to particular tasks (Badzinski & Gill, 1994; Kahneman, 1973). On the other hand, the counter argument believes that attentional processes are given to more difficult tasks (Badzinski & Gill, 1994; Kahneman, 1973; Lachman, Lachman & Butterfield, 1979). Thus, because more resources are required to understand the accent of an accented person, less effort can be directed at processing what is being said or if more attention is directed to message understanding, then messages produced by accented speakers may actually be better remembered because of the increased concentration. The data from this study support the first argument. Participants were able to recall greater amounts of information from the standard accented teacher, suggesting that they may have used up their cognitive resources before the recall task was completed with the British and Malaysian accented teachers.

The short messages used in this study begin to explain how comprehension is affected. Further research must examine other variables and longer messages to be able to better generalize what occurs in classrooms. Further testing of comprehension of accented messages is clearly needed to determine how comprehension is affected. Listening behavior and ability were not tested here but should be considered for further investigation since these may influence comprehension.

In the classroom, the real concern rests with how well students comprehend information from teachers. This study's preliminary finding that individuals seem to comprehend more information from North American English accented teachers than from foreign accented teachers is discouraging given that classrooms are increasingly multinational. Although this study is limited to standard North American English speaking students' abilities to comprehend accented speakers, any mixture of students' abilities to comprehend teachers because of accents jeopardizes the educational process. Therefore, it is essential that students and teachers seek ways to minimize any potentially negative effects of accents on the learning process. Although this study suggests that limited exposure to an accent is sufficient to trigger negative reactions, further investigation must examine a fuller range of cues to determine the effect in actual classrooms.

Further study should be conducted in the area of comprehension which examines information level data and higher order learning. In other words, the type of information is important. Collins, Brown and Larkin (1980), Badzinski and Gill, (1991) and Stanovich (1980) argue that understanding entails processing information explicit in the text as well as constructing implicit relationships from text concepts. If processing of lectures of accented speakers place additional demands on listeners, then it would be reasonable to expect that inferential elaborations will be more difficult for subjects than information recall from text. If a threshold is operating, the results of implicit and explicit recall should vary according to the intensity of the accent and the familiarity of the accent to listeners. Nonetheless, comprehension of information at higher levels than basic knowledge questions should be pursued.

Although the results of the relationship of stereotypes on perception formation did not achieve significance here, this focus of study must be continued. The

Assumed Characteristic Theory reveals important distinctions in the cues which individuals use to form stereotypes. Other factors, however, may enter the process. For example, Kahneman (1973) and Lachman, Lachman, and Butterfield's (1979) assessment of how we attend to difficult messages may pertain to the results of this study. For example, subjects who did not stereotype had not invested the same level of commitment in making the assessment as those who did stereotype which may have caused them to use less energy in processing the information. On a much brighter note, it may be that people do not stereotype teachers or classroom environments as much, as often, or in the same way as they do other individuals and situations. It may simply be that stereotyping is not as powerful in educational contexts. Although this would indeed be good news, its validity must be tested by further investigation.

Overall accent is an important influence on assessments of accented teachers and comprehension of lecture information. Although subjects clearly recognized distinctions among the accents as nonaccented, similar and dissimilar, they did not act on these features in assessing teachers according to the SDAS items or in comprehending information from the lectures.

ENDNOTES

1. Because the focus of this study was to examine standard North American students' responses to accented teachers, only standard North American English speaking students were asked to volunteer for this study. No indication of the nature of the study was revealed in asking for subjects. Students were merely told that only native born individuals could be used for this study. Because this study is the first in a series of studies, attempts to build adequate cell sizes of various nationalities of subjects were deemed outside of the scope of this study. Because mixed-sex classrooms have been a reality for decades, similarity issues based on sex were concluded to not be relevant. Analyses were performed checking for sex differences in responses (males = 39 subjects; females = 51 subjects). No significant differences in perceptions, stereotypes or comprehension emerged based on sex of subject.

2. Responses revealed an equal number of subjects who stereotyped and did not stereotype ($n = 45$) with equal representation within accent cell. While equal cell sizes are perhaps ideal, it is also quite surprising that they emerge. Because the Assumed Characteristics Theory scale breaks stereotyping into large categories of those who stereotype and those who do not, it is not unlikely to have this result. Conceptually according to this scale, the difference between an individual who stereotypes and one who does not is the result of one number difference on only one scale item (someone answering a Malaysian teachers ($M = 4.03$) were perceived more favorably than British teachers (dynamism $M = 3.51$, socio-intellectual $M = 3.89$). North American English accented teachers (dynamism $M = 4.27$, socio intellectual $M = 4.40$), however, were still perceived most favorably. The mean ratings for aesthetic qualities of the teachers emerged in the direction desired. American teachers ($M = 4.14$) were perceived most favorably with British teachers ($M = 3.57$) perceived less favorably than Americans but more favorably than Malaysian teachers ($M = 3.47$). The differences between British and Malaysian teachers were not statistically significant.

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